

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF VIRGINIA
ALEXANDRIA DIVISION**

In re Ex Parte Application of

Nokia Technologies Oy and Alcatel Lucent
SAS,

Applicants,

For an Order Pursuant to 28 U.S.C. § 1782
Granting Leave to Obtain Discovery for Use in
Foreign Proceedings.

Civil Action No. 1:23-mc-00032

DECLARATION OF RYAN W. KOPPELMAN

I, Ryan W. Koppelman, hereby declare, pursuant to 28 U.S.C. § 1746, as follows:

1. The statements herein reflect my personal knowledge and belief based on reasonable investigation and information presently known to me. If called to testify as a witness, I could and would competently testify thereto.
2. I am a partner with the law firm of Alston & Bird and counsel of record for Applicants Nokia Technologies Oy (“Nokia Technologies”) and Alcatel Lucent SAS (“Alcatel Lucent”) (collectively, “Nokia”) in the above-captioned matter. I make this declaration in support of Nokia’s *Ex Parte* Application for an Order Pursuant to 28 U.S.C. § 1782 Granting Leave to Obtain Discovery for Use in Foreign Proceedings.
3. Attached as Exhibit A is a true and correct copy of European Patent 2774375 B1 (the “EP ’375 Patent”).
4. Attached as Exhibit B is a true and correct copy of European Patent 2375749 B1 (the “EP ’749 Patent”).
5. Attached as Exhibit C is a true and correct copy of European Patent 2399207 B1

(the “EP ’207 Patent”).

6. The EP ’375 Patent and EP ’749 Patent are both Nokia patents directed to video coding.

7. The EP ’207 Patent is a Nokia patent directed to content distribution networks (CDNs).

8. The two video coding patents relate specifically to the H.265 standard, also known as HEVC, which stands for High Efficiency Video Coding.

9. Video coding in general involves compressing video files into a format called a “bitstream” so that the video can be more efficiently stored for subsequent playback or streamed over a network connection for more contemporaneous playback. The compressed bitstreams are later decompressed for playback.

10. The compressing is referred to as encoding and the decompressing is referred to as decoding.

11. Nokia’s video patents at issue in the 1782 application include separate claims directed to encoding and decoding.

12. Amazon engages in both encoding and decoding of video content. As a result, Amazon infringes different claims of Nokia’s video coding patents in different ways, requiring different types of proof.

13. The HEVC standard specifies the decoding process. That is, an HEVC decoder receives a bitstream and decodes it according to the HEVC standard.

14. Because the HEVC standard specifies how HEVC decoders work, an evidentiary showing that a decoder is HEVC standard-compliant is very often sufficient to prove infringement of decoder patent claims.

15. Many of Amazon’s end-user devices, such as televisions and streaming media players, are HEVC standard-compliant decoders.

16. The HEVC Standard does not specify an encoding process. Therefore, encoders have flexibility in compiling video bitstreams.

17. Because encoding processes are not specified by the HEVC standard, additional evidence would be useful in proving infringement of encoding patent claims, like those that Nokia is contemplating filing against Amazon.

18. HEVC-compliant bitstreams can be encrypted (which Amazon does) to protect the underlying media content – e.g., movies, TV shows, etc. – from illegal copying and piracy. A side effect of this encryption is that one typically cannot perform any in-depth analysis of the encoded bitstream which could otherwise be useful for determining patent infringement.

19. The discovery requested here will be useful and relevant in the analysis of the encoded bitstreams to confirm infringement of the encoding claims of the two video coding patents.

20. In general, a CDN is a geographically distributed network of servers that allows for lower latency delivery of content, such as media files, over the Internet.

21. Amazon’s public documentation points towards Amazon’s infringement of Nokia’s CDN patent via its Prime Video service.

22. According to Amazon’s public documentation, Amazon has branded its CDN as “CloudFront,” which caches Internet content on hundreds of points of presence closer to content owners’ users around the world. CloudFront has an additional feature branded “Origin Shield,” which increases caching ratios and protects content owners’ origin servers by preventing server overload.

23. Amazon's description of these features in its own documentation generally tracks the claims of Nokia's CDN patent, in particular with how Amazon's use of CloudFront for Amazon Prime Video handles regional edge caches in video on demand (VOD) streaming.

24. Amazon maintains one of its corporate headquarters, Amazon HQ2, in Arlington, Virginia. Amazon also maintains a large data center in Herndon, Virginia. Both Amazon facilities are in the Eastern District of Virginia. Amazon currently has over 30,000 employees in the Virginia and DC area. *See Amazon's Second Headquarters Comes to Life in 21 Photos from the Official Opening*, AMAZON (June 15, 2023), available at <https://www.aboutamazon.com/news/amazon-offices/amazon-opens-offices-at-hq2-in-arlington-va>.

I declare under the penalty of perjury under the laws of the United States of America that the foregoing is true and correct.

Executed this ninth day of November, 2023, in Los Angeles, California.

/s/ Ryan W. Koppelman
Ryan W. Koppelman

**ATTORNEY FOR APPLICANT NOKIA
TECHNOLOGIES AND ALCATEL
LUCENT SAS**